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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/317,156	05/24/1999	CHING YU	50100-802	8724

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WASHINGTON, DC 20005-3096

EXAMINER

HOM, SHICK C

ART UNIT	PAPER NUMBER
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2666

DATE MAILED: 12/18/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

TS

Office Action Summary

Application No.

09/317,156

Applicant(s)

YU ET AL.

Examiner

Shick C Hom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,12,13 and 16 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11,14 and 15 is/are allowed.
- 6) ☒ Claim(s) 1,6,8-10,17,18,21 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 4,5,7,19,20 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 4-11, 14-15, and 17-25 have been considered but are moot in view of the new ground(s) of rejection.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1, 10, and 17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 6,442,137.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the application's claims 1 and 17 merely broaden the scope of the U.S. Patent

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No. 6,442,137 claim 1 by eliminating the limitations that a second port has an initially assigned second number of memory access slots less than the first number of memory access slots, and that the packet data are transferred at a prescribed data rate. Further, the scheduler reassigning the number of slots to the ports based on traffic as recited in claim 1 clearly reads on the scheduler selectively assigning slots based on the stored programmable information entries as now recited in claims 1 and 17. Likewise, the application's claim 10 merely broaden the scope of U.S. Patent No. 6,442,137 claim 1 by eliminating the assignment being based on traffic and now recites the assignment being based on detected conditions. It has been held that the omission of a element and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 136 USPQ (CCPA). Also note Ex parte Rainu, 168 USPQ 375 (Bd. App. 1969); omission of a reference element whose function is not needed would be obvious to one skilled in the art.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Morris (5,390,184).

Regarding claim 1:

Morris discloses the network switch (see Fig. 3 and the telecommunication switch in col. 2 lines 15-32) comprising: a plurality of ports configured for transferring data packets (in col. 2 lines 15-32 see ports for switching digital data in cells which corresponds to the data packets); an external memory interface configured for transferring the data packets between the network switch and an external memory, the external memory interface including a scheduler for selectively assigning memory access slots to ports for access to the external memory (in col. 2 lines 15-32 see the common memory connected to the ports and the scheduler for reserving and sending cell to the selected slot of the common memory), wherein selectively assigning memory access slots by the scheduler is based on respective programmable information entries, the external memory interface includes an assignment table memory for storing the respective programmable information entries, and the programmable

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information entries are stored in the assignment table memory by an external controller (in col. 2 lines 15-51 see the slot reservation table and the slot reservation controller, in col. 4 line 45 to col. 5 line 57 see the mechanism for scheduling packets to memory via output ports using memory manager having a connection processor which programs a reservation table to indicate which slot is reserved for which channel, and col. 7 lines 26-50 which recite the scheduler assigning slots through the connection processor).

Regarding claim 17:

Morris discloses the switched network system (see Fig. 3 and the telecommunication switch in col. 2 lines 15-32) comprising: a first memory for storing a plurality of programmable system settings (in col. 2 lines 15-51 see the slot reservation table); a second memory for storing data packets (in col. 2 lines 15-32 see the common memory); a network switch having a plurality of ports configured for transferring the data packets (in col. 2 lines 15-32 see ports for switching digital data in cells which corresponds to the data packets), the network switch including: (1) an external memory interface configured for transferring data packets between the network switch and the second memory; and (2) a scheduler for selectively assigning memory access slots to each of the ports

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for access to the second memory (in col. 2 lines 15-32 see the common memory connected to the ports and the scheduler for reserving and sending cell to the selected slot of the common memory), the selectively assigning memory access slots to each of the ports being based on a selected one of the plurality of programmable system settings stored in the first memory; and a system controller for supplying the selected one of the plurality of programmable system settings to the network switch (in col. 2 lines 15-51 see the slot reservation table and the slot reservation controller, in col. 4 line 45 to col. 5 line 57 see the mechanism for scheduling packets to memory via output ports using memory manager having a connection processor which programs a reservation table to indicate which slot is reserved for which channel, and col. 7 lines 26-50 which recite the scheduler assigning slots through the connection processor).

Regarding claim 18:

Morris disclose wherein the external memory interface includes a memory access slot assignment table memory (in col. 2 lines 15-51 see the slot reservation table).

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Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 6, 8-10, 21, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris (5,390,184) in view of Daniel et al. (5,841,772).

For claims 6, 8-10, 21, and 23-25 Morris discloses the network switch and switched network system described in paragraph 5 of this office action. For claims 4, 6, 8-10, 19, 21, and 23-25 Morris discloses all the subject matter of the claimed invention with the exception of the use of a continuously repeating sequence based on a sequence of memory access slot assignments as in claims 6, 21, the step of selecting slot assignments based on detected conditions as in claim 10, the first memory being an EEPROM as in claim 25, the assignment table memory being a RAM as in claims 8, 23, and being a group of registers as in claims 9, 24.

Daniel et al. teach that it is known to use of firmware in a specialized enhanced direct memory access module, the use of RAM, and the use of registers in a memory structure as set forth at col. 5 line 66 to col. 6 line 34, Fig. 13, and col. 7 lines 45-54, respectively, in the field of digital and multiplex communications for the purpose of providing for cell buffer memory in a chip which clearly anticipate the first memory being an EEPROM as in claim 25, the assignment table memory being a

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RAM as in claims 8, 23, and the assignment table memory being a group of registers as in claims 9, 24. Col. 3 lines 25-39 which recite that differing classes of service are provided to users of ATM systems whereby a cell is transmitted from a given connection on a regularly repeating time interval, perhaps one cell every couple of microseconds and another class of service is transmitted dependent on the video compression technique in use and the video image contents i.e., rate of video image change or frames per second clearly anticipate use of a continuously repeating sequence based on a sequence of memory access slot assignments as in claims 6, 21 and the step of selecting slot assignments based on detected conditions as in claim 10.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the first memory being an EEPROM, the assignment table memory being a RAM, and being a group of registers, the use of a continuously repeating sequence based on a sequence of memory access slot assignments, and the step of selecting slot assignments based on detected conditions as taught by Daniel et al. to the system of Morris because Daniel et al. teach the desirable advantage of using known parts and technique for implementing memory and assigning slot in the network switch of Morris. The motivation

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for using the first memory being an EEPROM, the assignment table memory being a RAM, and being a group of registers, the use of a continuously repeating sequence based on a sequence of memory access slot assignments, and the step of selecting slot assignments based on detected conditions as taught by Daniel et al. in the network switch of Morris being that it provides more efficiency for the system since the system uses known parts and technique for implementation.

Allowable Subject Matter

9. Claims 11, 14, and 15 are allowed.

10. Claims 4-5, 7, 19-20, and 22 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Christensen et al. disclose an apparatus and method for accessing memory in a TDM network.

Leung discloses a common scalable queuing and dequeuing architecture and method relative to network switch data rate.

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12. Any response to this nonfinal action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal
Park II, 2121 Crystal Drive, Arlington. VA., Sixth
Floor (2600 Receptionist at (703) 305-4750).

Any inquiry concerning this communication or earlier
communications from the examiner should be directed to Shick Hom
whose telephone number is (703) 305-4742. The examiner's
regular work schedule is Monday to Friday from 8:00 am to 5:30
pm EST and out of office on alternate Friday.

If attempts to reach the examiner by telephone are
unsuccessful, the examiner's supervisor, Seema Rao, can be
reached at (703) 308-5463.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

A handwritten signature in black ink, appearing to be 'JMM' with a horizontal line extending from the top right.

SH

December 10, 2003

DANSTON
TECHNOLOGY CENTER